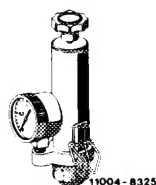


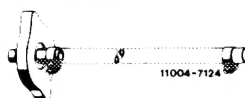
Special tools

Tester for cooling system



001 589 48 21 00

Radiator cap with hose for leak test



605 589 00 25 00

Note

Since light alloy radiators with plastic radiator tanks cannot be repaired by soft soldering, a sealing compound has been developed and approved.

This compound permits also the sealing of radiators made of a heavier metal (non-ferrous metal radiator).

The sealing compound has a silicone caoutchouc base and remains permanently elastic in its end condition. Its temperature resistance extends from -50°C to $+200^{\circ}\text{C}$.

Due to the various means of access on radiator (e.g. on core more difficult than on radiator box), the sealing compound is available in a diluted and an undiluted version.

The varying kinds of sealing compound and the primer are combined in a repair kit, part No. 123 989 00 20.

Designation	Purpose
Primer	Preparation of wash primer.
Sealing compound undiluted	for sealing easily accessible areas
Sealing compound diluted	for sealing poorly accessible areas (e.g. laterally on cooling tubes)

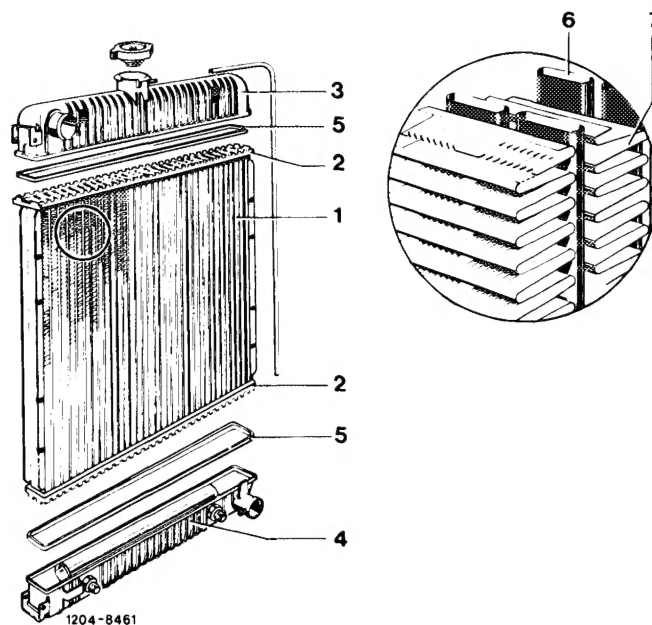
Sealing compound and primer have a shelf life of approx. 1 year, if they are always closed airtight upon use.

Turbid primer should no longer be used.

Individually, the following parts or areas in coolant circuit can be sealed with the sealing compound:

- a) Plastic radiator tanks (3 and 4).
- b) Heavy-metal radiator tanks (holes up to 1.5 mm dia.).
- c) Light-alloy and heavy-metal cooling tubes (6).
- d) Tube plate (2).

- | | |
|------------------------|-----------------|
| 1 Radiator core | 5 Gasket |
| 2 Tube plate | 6 Cooling tubes |
| 3 Radiator tank top | 7 Ribs |
| 4 Radiator tank bottom | |



e) Bead flange (connecting point between radiator core and radiator tank).

f) Heat exchanger of heating system.

Damaged spots on radiator tanks, which are subject to higher loads, such as torn or broken fastening plates, cracks in fillets to connections, chipped spots and very long or large cracks on top should not be repaired, since the sealing compound can absorb only very low loads.

Plastic radiator tanks of radiators made by Behr can be exchanged in Behr radiator repair shops or Inter-Radia Service Stations by means of special tools or fixtures. If required, call the nearest Behr repair shop or Inter-Radia Service Station with regard to performing such repairs.

If there is no such a possibility, replace radiator.

On heavy-metal radiators with plastic radiator tanks, soldering jobs on core are permitted only up to a distance of 20 mm from radiator tank, since otherwise the high soldering temperature will damage the gasket (5) and the radiator tank (3 or 4). Leaks which are closer to radiator tank are repaired with sealing compound only.

If the leak can be clearly localized in installed condition, the radiator need not be removed. In such a case it will be sufficient to drain the coolant and to pressure-test the cooling system after closing the leaks.

When handling the primer fluid and the sealing compound, note the following:

The primer is easily inflammable (pay attention to safety rules, dangerous materials Class A1).

Acetic acid will be released up to complete linking (setting) of sealing compound. Do not permit sealing compound to come into contact with skin. Clean any such spots immediately with water and soap. Rinse eyes with water and see a doctor, if required.

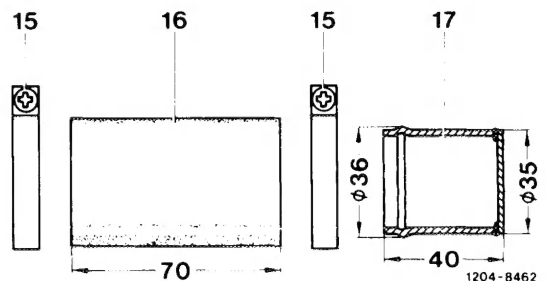
Sealing

1 If the leak cannot be accurately located in installed condition, remove radiator. The oil cooler may remain installed.

2 Clean radiator.

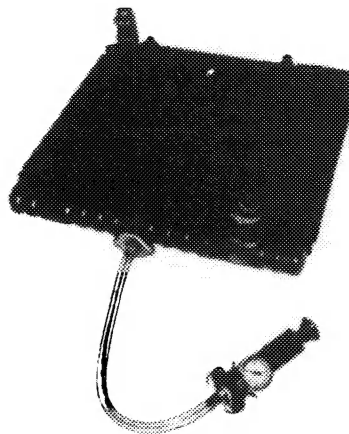
3 Close water connections with self-made caps.

- 15 Clamp A 43/9 (916002 043100)
16 Short length of hose (123 501 00 82)
17 Cap made of tubing 35 mm dia.



4 Close oil cooler connections with plastic caps or plugs made of used oil cooler line. For this purpose, saw-off oil cooler line shortly behind nipple and close with solder.

- 5 Connect tester to radiator.
- 6 Place radiator into a water bath.
- 7 Put radiator under pressure by means of tester and watch where air bubbles are rising.
- 8 Mark leaking spot.
- 9 Remove radiator and release pressure.



120-15 952

- 10 Blow radiator dry with compressed air.
- 11 Clean spot to be sealed by means of a conventional cleaning agent (e.g. Tri or benzine). Always clean area slightly larger than the spot to be sealed (e.g. in the event of cracks approx. 20–30 mm beyond ends of cracks).

The paint need not be removed. Then blow radiator dry at respective spot by means of compressed air.

There should be no remains of dust and grease.

- 12 Apply fluid primer uniformly and very thinly by means of a brush.

Here, too, similar to cleaning, apply the fluid primer beyond the spot about to be sealed. To avoid contamination of primer in tank, pour the quantity required for repairs into a separate vessel.

Attention !

Pay attention to safety rules !

13 Let primer dry at ambient temperature for approx. 10 minutes.

14 Set up radiator in such a manner that the sealing compound cannot flow away from the spot to be sealed.

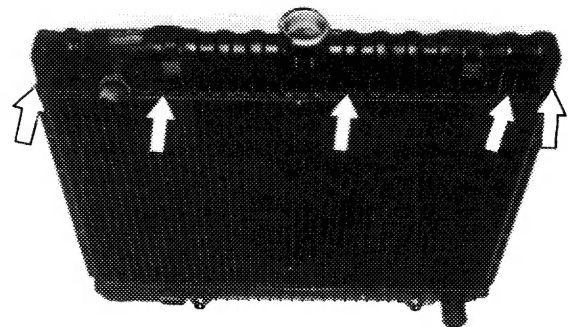
15 Depending on access, apply diluted or undiluted sealing compound. Use brush, spatula or the like for distributing the sealing compound.

Attention !

When applying and spreading compound, make sure that no air pockets will be formed.

Similar to cleaning and priming, apply sealing compound beyond the spot to be sealed. If there are several leaking spots on bead flange (arrows), it is recommended to seal the bead flange all-around.

Seal leaks in core from both sides.



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At end of sealing, close tube immediately. Acetic acid will be released up to complete linking (setting) of sealing compound. Avoid skin contact. Clean any such spots immediately with water and soap, rinse eyes with water and see a doctor, if required.

16 Leave radiator in horizontal or upright position for at least 3 hours to dry sealing compound. Depending on quantity of applied sealing compound and size of the spot to be sealed, complete linking (setting) of the sealing compound into a permanent elastic connection is completed after max. 24 hours at ambient temperature.

17 Pressure-test radiator in a water bath for approx. 5 minutes at 1.5 bar gauge pressure (1.5 atü).

If leaks are still showing up, repeat sealing procedure starting at item 7.

18 Remove tester and closing devices.

19 Upon re-installation of radiator, pressure-test cooling system with tester.